

### **Claims**

1           1. A system for collecting and presenting survey information  
2 comprising:

3           a connection device connected to an external communication system  
4 for connecting said communication system to a survey participant;

5           a CATI unit connected to said connection device, wherein said  
6 Connection device transfers said participant communication connection to  
7 said CATI unit when said connection is successful, and further wherein an  
8 agent uses said CATI unit to ask said participant manual survey questions;

9           an IVR unit connected to said CATI unit, wherein said CATI agent  
10 transfers said participant's communication connection to said IVR unit for  
11 conducting an automated survey, wherein said IVR unit accepts oral  
12 responses from said participant; and

13           a database for storing said responses to said manual survey and said  
14 automated survey.

1           2. The system for collecting and presenting survey information of  
2 claim 1, further comprising:

3           a CTI unit, wherein said CTI unit is connected to said connection  
4 device to monitor the status of said connection device, and further wherein  
5 said CTI unit is connected to said CATI unit to monitor the status of said  
6 CATI unit and said agent using said CATI unit; and still further wherein said  
7 CTI unit is connected to said IVR unit to monitor said conducting of said  
8 automated survey.

1           3. The system for collecting and presenting survey information of  
2 claim 2, wherein said CATI agent asks said participant for permission to  
3 allow said IVR unit to conduct said automated survey, and further wherein  
4 said IVR unit conducts said automated survey according to a pre-

5 determined survey format if said participant assents, and still further wherein  
6 said CATI agent performs said manual survey according to said pre-  
7 determined survey format if participant does not assent.

1 4. The system for collecting and presenting survey information of  
2 claim 3, wherein said pre-determined survey format uses a drill-down survey  
3 technique, wherein a following survey question depends on the answer to a  
4 previous question.

1 5. The system for collecting and presenting survey information of  
2 claim 1, wherein said participant may transfer said communication  
3 connection from said IVR unit to said CATI unit by using an oral response,  
4 and further wherein said CATI agent then conducts said manual survey at  
5 the point on said pre-determined survey format where said transfer from  
6 said IVR unit occurred.

1 6. The system for collecting and presenting survey information of  
2 claim 5, wherein said conducting of said automated or said manual surveys  
3 includes the use of a verbatim, wherein said participant can orally  
4 communicate detailed opinions to said IVR unit or said CATI agent,  
5 respectively, and further wherein said verbatims are stored in said database.

1 7. The system for collecting and presenting survey information of  
2 claim 6, further comprising:

3 a processing unit for converting said stored responses to said  
4 surveys into survey information;

5 a presenting unit for presenting said survey information to a  
6 consumer.

1           8. The system for collecting and presenting survey information of  
2 claim 7, wherein said survey information is derived from a plurality of  
3 surveys derived from a plurality of participants, and further wherein said  
4 system presents said survey information to said consumer over a computer  
5 network, and still further wherein said consumer must be validated before  
6 said system will allow the consumer to access said survey information.

1           9. The system for collecting and presenting survey information of  
2 claim 8, wherein said survey information is available for presenting to said  
3 consumer within 24 hours of the completion of the conducting of said  
4 plurality of surveys.

1           10. A system for collecting and presenting survey information  
2 comprising:

3           a connection device connected to an external communication system  
4 for connecting said communication system to a survey participant;

5           a CATI unit connected to said connection device, wherein said  
6 connection device transfers said participant communication connection to  
7 said CATI unit when said connection is successful, and further wherein an  
8 agent uses said CATI unit to ask said participant manual survey questions;

9           an IVR unit connected to said CATI agent, wherein said CATI agent  
10 transfers said participant communication connection to said IVR unit for  
11 conducting an automated survey, and further wherein said IVR unit accepts  
12 oral responses from said participant, and still further wherein said CATI  
13 agent asks said participant for permission to allow said IVR unit to conduct  
14 said automated survey, and further wherein said IVR unit conducts said  
15 automated survey according to a pre-determined survey format if said  
16 participant assents, and even further wherein said CATI agent performs said  
17 manual survey according to said pre-determined survey format if participant

18 does not assent, and yet further wherein said participant may transfer said  
19 survey interview from said IVR unit to said CATI unit by using an oral  
20 response, wherein said CATI agent then conducts said manual survey at the  
21 point on said pre-determined survey format where said transfer from said  
22 IVR unit occurred;

23 wherein said conducting of said automated or said manual surveys  
24 includes the use of a verbatim, wherein said participant can orally  
25 communicate detailed opinions to said IVR unit or said CATI agent,  
26 respectively, and further wherein said verbatims are stored in said database

27 a CTI unit, wherein said CTI unit is connected to said dialer unit to  
28 monitor the status of said connection device, and further wherein said CTI  
29 unit is connected to said CATI unit to monitor the status of said CATI unit  
30 and said agent using said CATI unit; and still further wherein said CTI unit is  
31 connected to said IVR unit to monitor said conducting of said automated  
32 survey;

33 a database for storing said responses to said manual and said  
34 automated surveys;

35 a processing unit for converting said stored responses to said  
36 surveys into survey information, wherein said survey information is derived  
37 from a plurality of surveys derived from a plurality of participants, and

38 a presenting unit for presenting said survey information to a  
39 consumer, wherein said system presents said survey information to said  
40 consumer over a computer network, and still further wherein said consumer  
41 must be validated before said system will allow the consumer to access said  
42 survey information, and still further wherein said system may limit said  
43 access by consumer to an approved subset of said survey information.

1 11. The system for collecting and presenting survey information of  
2 claim 10, wherein said survey information is available for presenting to said

3 consumer within 24 hours of the completion of the conducting of said  
4 plurality of surveys.

1 12. A system for collecting and presenting survey information  
2 comprising:

- 3 (I) means for selecting a participant from a list of potential participants;  
4 (II) means for connecting said participant to a survey communication  
5 system;  
6 (III) means for conducting an automated survey interview if said participant  
7 assents to an automated survey interview, wherein said conducting is  
8 performed by an automated survey unit, and further wherein said automated  
9 survey unit accepts oral responses from said participant which are  
10 processed using voice recognition into survey data.  
11 (IV) means for conducting a manual survey interview if said participant  
12 does not assent to an automated survey interview;  
13 (V) means for saving said automated and said manual survey interviews in  
14 a database.

1 13 The system for collecting and presenting survey information of  
2 claim 12, further comprising:

- 3 (I) means for allowing a participant to orally request that said automated  
4 survey interview be transformed into a manual survey interview;  
5 (II) means for providing a pre-determined interview format, wherein said  
6 automated and said manual interviews follow said interview format, and  
7 further wherein said manual survey interview continues said pre-determined  
8 interview format at the next question of said format when said automated  
9 survey interview is transformed into said manual survey interview;

1           14. The system for collecting and presenting survey information of  
2 claim 13, further comprising:

- 3       (I) means for processing said survey interview into survey information;  
4       (II) means for presenting approved portions said survey information to a  
5 survey consumer, wherein the identity of said consumer must be validated  
6 before being presented with said survey information.

1           15. The system for collecting and presenting survey information of  
2 claim 14, wherein said survey information is derived from a plurality of  
3 surveys of a plurality of participants, and further wherein said survey  
4 information is available for presenting to said consumer within 24 hours of  
5 the completion of the conducting of said plurality of surveys.

1           16. A process for collecting and presenting survey information  
2 comprising the steps of:

- 3       (I) selecting a participant from a list of potential participants;  
4       (II) connecting said participant to a survey communication system;  
5       (III) transferring said participant's communication system connection to an  
6 automated survey unit;  
7       (IV) conducting said survey interview, wherein said conducting is performed  
8 by said automated survey unit, and further wherein an automated survey  
9 unit accepts oral responses from said participant, said oral responses being  
10 processed using voice recognition into survey data;  
11       (V) saving said survey interview in a database.

1           17. The process of collecting and presenting survey information as  
2 in claim 16, wherein said conducting of said survey interview is performed  
3 by providing survey questions to participant using a pre-determined survey

- 4 procedure utilizing drill-down questioning, wherein a following survey  
5 question depends on the answer to a previous question.

1 18. The process of collecting and presenting survey information as  
2 in claim 17, further comprising the steps of:

- 3 (I) processing said survey data into survey information;  
4 (II) saving said survey information in a database;  
5 (III) presenting said survey information to a consumer.

1 19. The process of collecting and presenting survey information as  
2 in claim 16, wherein said transferring of said participant's communication  
3 system connection to said automated survey unit occurs only if said survey  
4 participant agrees to said transfer, and further wherein said survey interview  
5 is conducted manually by an agent if said participant does not agree to said  
6 transfer.

1 20. The process of collecting and presenting survey information as  
2 in claim 19, wherein said conducting of said survey interview is performed  
3 by providing survey questions to said participant using a pre-determined  
4 survey question procedure utilizing drill-down questioning for said  
5 conducting of both manual and automated surveys, wherein a following  
6 survey question depends on the answer to a previous question.

1 21. The process of collecting and presenting survey information as  
2 in claim 19, wherein said agent can transfer said participant back to said  
3 automated survey unit to continue said survey interview, and further wherein  
4 said participant participating in an automated survey can be transferred to  
5 said agent by a voice command from said participant.

22. The process of collecting and presenting survey information as in claim 21, wherein said conducting of said survey interview is performed by providing survey questions to said participant using a pre-determined survey question procedure utilizing drill-down questioning for said conducting of both manual and automated surveys, wherein a following survey question depends on the answer to a previous question.

23. The process of collecting and presenting survey information as in claim 19, further comprising the steps of:

- (I) processing said survey data into survey information;
- (II) saving said survey information in a database;
- (III) presenting said survey information to a consumer.

24. The process of collecting and presenting survey information as in claim 19, further comprising the steps of:

- (I) processing said survey data into survey information;
- (II) saving said survey information in a database;
- (III) presenting said survey information to a consumer.

25. A process for collecting and presenting survey information comprising the steps of:

- (I) selecting a participant from a list of potential participants;
- (II) connecting said participant to a survey communication system;
- (III) transferring said participant's communication system connection to an automated survey unit if said survey participant agrees to said transfer, wherein said participant participating in an automated survey can be



8 transferred to said agent by a voice command from said participant, and  
9 further, and further

10 wherein said survey interview is conducted manually by an agent if  
11 said participant does not agree to said transfer,

12 wherein said conducting of said survey interview is performed by  
13 providing survey questions to participant using a pre-determined survey  
14 procedure utilizing drill-down questioning, wherein a following survey  
15 question depends on the answer to a previous question;

16 (IV) conducting said survey interview, wherein said conducting is performed  
17 by said automated survey unit, and further wherein said automated survey  
18 unit accepts oral responses from said participant, said oral responses being  
19 processed using voice recognition into survey data;

20 (V) saving said survey interview in a database.

21 (VI) processing said survey data into survey information;

22 (VII) saving said survey information in a database;

23 (VIII) presenting said survey information to a consumer.

1 26. A process for collecting and presenting survey information  
2 comprising the steps of:

3 (I) collecting survey data, said collecting comprising the steps of

4 (A) selecting a participant from a list of potential participants,  
5 wherein said selecting is done according to specified schedules;

6 (B) connecting said participant to a survey communication system,  
7 said connecting comprising the steps of:

8 (i) attempting to connect with said participant via said survey  
9 communication system, said attempting including the steps of:

- 10 (ii) requesting that said participant agree to communicate  
11 with an IVR unit for a survey interview; and
- 12 (iii) collecting call record information, wherein said call record  
13 information is stored in a database;
- 14 and
- 15 (C) conducting said survey interview, wherein said conducting is  
16 performed by said IVR unit if said participant agreed to communicate  
17 with said IVR unit, and further wherein said conducting is performed by  
18 a CATI agent if participant did not agree to communicate with said IVR  
19 unit, said conducting of said survey interview comprising the steps of:
- 20 (i) asking survey questions of participant using a pre-  
21 determined survey question procedure utilizing drill-down  
22 questioning, wherein said survey questions provide sufficient  
23 survey data to allow for the creation of survey information; and  
24 further wherein survey responses by participant are done orally,  
25 and still further wherein said survey data optionally includes  
26 voice interviews;
- 27 (ii) saving said survey data in said database, wherein said  
28 saving includes voice recognition processing of said oral  
29 responses of participant if said conducting of survey interview is  
30 performed by said IVR unit, wherein said voice recognition  
31 occurs at approximately real-time, and further wherein the voice  
32 recognition processed response is used to determine a next  
33 survey question;
- 34 (iii) transferring said communication system connection to a  
35 CATI unit if said participant requests such a transfer while the  
36 IVR unit is conducting said survey interview, wherein said CATI  
37 agent uses said CATI unit to continue said conducting a survey  
38 interview;
- 39 (iv) transferring said communication system connection to a  
40 CATI unit when said survey question procedure requires such a

- 41 transfer, wherein said CATI agent then conducts said survey  
42 interview using said CATI unit, and further wherein said CATI  
43 agent can transfer said communication system connection back  
44 to said IVR unit to continue said survey interview;
- 45 (v) monitoring said survey question procedure status,  
46 wherein said status information can be made available for  
47 display;
- 48 (vi) terminating said conducting a survey interview when said  
49 pre-determined survey question procedure is complete or when  
50 said participant requests such termination;

1 27. A process for collecting and presenting survey information as in  
2 claim 26, further comprising the steps of:

3 (I) processing said survey data, wherein said processing converts said  
4 survey data collected from a plurality of participants into survey information,  
5 said processing comprising the steps of:

- 6 (A) generating consumer satisfaction measures;  
7 (B) generating employee rating measures;  
8 (C) generating employer or organization rating measures;  
9 (F) generating quality assessment measures; and  
10 (G) analyzing said generated measures and survey data;  
11 and  
12 (H) storing said survey information in said database;

13 (II) providing a survey information consumer said survey information, said  
14 providing further comprising the steps of:

15 (A) connecting a survey information consumer computer to a  
16 presenting system, wherein said connecting is over a computer  
17 network, said connecting comprising the steps of:

- 18 (i) logging the consumer's computer into the system,  
19 wherein the consumer identity is verified; and

20 (iv) preventing the consumer not verified from accessing said  
21 medical survey information;

22 (B) presenting said survey information to said consumers, said  
23 presenting comprising the steps of:

24 (i) providing said consumers with options for viewing  
25 aggregates of said survey information;

26 (ii) providing said consumers with options for viewing  
27 summaries of said survey information;

28 (iii) providing said consumers with options for viewing a  
29 subset of said survey information;

30 (iii) providing said consumers with options for viewing said  
31 survey data; and

32 (iv) formatting said presented information for presenting by  
33 said consumer computer, wherein said presenting can be  
34 graphical, auditory, and textual.

35 (C) customizing said presented information to the particular needs  
36 or access privileges of the consumer, wherein some consumers may  
37 have access to a subset of medical information; and

38 (D) allowing the user to log off said system.

39 and

40 (III) evaluating said process for collecting and presenting survey  
41 information, said evaluating comprising:

42 (A) evaluating the performance of said CATI agents; and

43 (B) evaluating the performance of said voice recognition processing.

1 28. A process for collecting and presenting medical survey  
2 information for a medical care provider comprising the steps of:

3 (I) collecting survey data, said collecting comprising the steps of

- 4 (A) selecting a participant from a list of potential participants,  
5 wherein said selecting is done according to specified schedules;
- 6 (B) connecting said participant to a survey communication system,  
7 said connecting comprising the steps of:
- 8 (i) attempting to connect with said participant via said survey  
9 communication system, said attempting including the steps of:
- 10 (a) initiating a survey communication system  
11 connection;
- 12 (b) transferring said connection to a CATI unit if said  
13 connection is successful, wherein if said connection is not  
14 successful, selecting a new participant;
- 15 (c) requesting that said participant agree to participate  
16 in a survey, wherein said requesting is performed by said  
17 CATI agent using said CATI unit;
- 18 (d) requesting recall information from said participant  
19 if said participant has not agreed to participate in said  
20 survey, wherein said requesting is performed by said  
21 CATI agent, and further wherein said recall information  
22 includes a request to connect again at a different time or  
23 using a different communication system; and
- 24 (e) terminating said connection after said requesting  
25 of recall information if said participant has not agreed to  
26 participate in said survey;
- 27 (ii) requesting that said participant agree to communicate  
28 with an IVR unit for a survey interview; and
- 29 (iii) collecting call record information comprising:
- 30 (a) overall connection attempts;
- 31 (b) connection attempts for each participant  
32 contacted; and

- 33 (c) connection durations;
- 34 wherein said call record information is stored in a database;
- 35 and
- 36 (C) conducting said survey interview, wherein said conducting is  
37 performed by said IVR unit if said participant agreed to communicate  
38 with said IVR unit, and further wherein said conducting is performed by  
39 said CATI agent if participant did not agree to communicate with said  
40 IVR unit, said conducting said survey interview comprising the steps of:
- 41 (i) asking survey questions of participant using a pre-  
42 determined survey question procedure utilizing drill-down  
43 questioning, wherein said survey questions provide sufficient  
44 survey data to allow for the creation of medical survey  
45 information; and further wherein survey responses by participant  
46 are done orally, and still further wherein said survey data  
47 optionally includes voice interviews;
- 48 (ii) saving said survey data in said database, wherein said  
49 saving includes voice recognition processing of said oral  
50 responses of participant if said conducting of survey interview is  
51 performed by said IVR unit, wherein said voice recognition  
52 occurs at approximately real-time, and further wherein the voice  
53 recognition processed response is used to determine a next  
54 survey question;
- 55 (iii) transferring said communication system connection to a  
56 CATI unit if said participant requests such a transfer while the  
57 IVR unit is conducting said survey interview, wherein said CATI  
58 agent uses said CATI unit to continue said conducting a survey  
59 interview;
- 60 (iv) transferring said communication system connection to a  
61 CATI unit when said survey question procedure requires such a  
62 transfer, wherein said CATI agent then conducts said survey  
63 interview using said CATI unit, and further wherein said CATI

- 64 agent can transfer said communication system connection back  
65 to said IVR unit to continue said survey interview;
- 66 (v) monitoring said survey question procedure status,  
67 wherein said status information can be made available for  
68 display;
- 69 (vi) terminating said conducting a survey interview when said  
70 pre-determined survey question procedure is complete or when  
71 said participant requests such termination;
- 72 (II) processing said survey data, wherein said processing converts said  
73 survey data collected from a plurality of participants into medical survey  
74 information, said processing comprising the steps of:
- 75 (A) generating consumer satisfaction measures comprising:
- 76 (i) consumer loyalty measures;
- 77 (ii) medical care satisfaction measures;
- 78 (iii) medical facility satisfaction measures;
- 79 (iv) medical staff satisfaction measures;
- 80 (v) positive comments with reasons; and
- 81 (vi) negative comments with reasons;
- 82 (B) generating staff rating measures comprising:
- 83 (i) staff loyalty measures;
- 84 (ii) staff performance measures;
- 85 (iii) staff satisfaction measures; and
- 86 (iv) staff continuing education measures;
- 87 (C) generating doctor rating measures comprising:
- 88 (i) quality of medical care measures;
- 89 (ii) doctor performance measures;
- 90 (ii) doctor satisfaction measures;
- 91 (iii) doctor loyalty measures; and
- 92 (iv) doctor continuing education measures;

- 93 (D) generating care delivery measures comprising:
- 94 (i) cost measures including:
- 95 (a) cost of medical care paid by consumer measures;
- 96 (b) cost of medical care paid by non-consumer
- 97 measures;
- 98 (c) cost of providing medical care measures; and
- 99 (d) overhead costs measures;
- 100 and
- 101 (ii) profit measures;
- 102 (E) generating medical care quality assessment measures
- 103 comprising:
- 104 (i) mortality measures
- 105 (ii) morbidity measures;
- 106 (iii) complications measures;
- 107 (iv) medical procedure results measures;
- 108 (iv) medical procedure follow-up measures;
- 109 (vi) patient mental health measures;
- 110 (vii) social impact measures;
- 111 (viii) hospital stay length measures;
- 112 (ix) HEDIS® technical quality measures; and
- 113 (x) PM PM cost measures;
- 114 (F) analyzing said generated measures and survey data, said
- 115 analyzing comprising the steps of:
- 116 (i) aggregating survey data to form assessments;
- 117 (ii) normalizing comparisons between specific named units,
- 118 said named units including:
- 119 (a) doctors or specialists;
- 120 (b) medical care organizations or divisions;
- 121 (c) staff persons;



- 122 (d) managers;
- 123 (e) specific medical treatments; and
- 124 (f) patient group status;
- 125 (iii) determining changes over time;
- 126 (iv) determining differences geographically; and
- 127 (v) generating summaries;
- 128 and
- 129 (G) storing said medical survey information in said database;
- 130 (III) providing a medical survey information consumer said medical survey
- 131 information, said providing further comprising the steps of:
- 132 (A) connecting a medical survey information consumer computer to
- 133 a presenting system, wherein said connecting is over a computer
- 134 network, said connecting comprising the steps of:
- 135 (i) logging in the consumer computer to the system, said
- 136 login comprising the steps of:
- 137 (a) processing a consumer login request, said login
- 138 request comprising the steps of:
- 139 (1) providing said consumer with a login
- 140 prompt;
- 141 (2) accepting a consumer login input, said login
- 142 input comprising:
- 143 a user ID; and
- 144 a user password;
- 145 and
- 146 (b) processing the consumer login input, said
- 147 processing comprising the steps of:
- 148 comparing said user ID against a verified
- 149 consumer list, wherein if said user ID is verified,
- 150 then:

151 verifying said user password by comparing said  
152 password to a stored password corresponding to  
153 said user ID, if said user password is verified then:  
154 permitting consumer access to the system;  
155 and  
156 (iv) preventing the consumer not logged in from accessing  
157 said medical survey information;  
158 (B) presenting said medical survey information to said consumers,  
159 said presenting comprising the steps of:  
160 (i) providing said consumers with options for viewing  
161 aggregates of said medical survey information;  
162 (ii) providing said consumers with options for viewing  
163 summaries of said medical survey information;  
164 (iii) providing said consumers with options for viewing a  
165 subset of said medical survey information;  
166 (iii) providing said consumers with options for viewing said  
167 medical survey data; and  
168 (iv) formatting said presented information for presenting by  
169 said consumer computer, said presenting including:  
170 graphical display;  
171 auditory presentment; and  
172 textual display;  
173 (C) customizing said presented information to the particular needs  
174 or access privileges of the consumer, wherein some consumers may  
175 have access to a subset of medical information; and  
176 (D) allowing the user to log off said system.  
177 and

- 178 (IV) evaluating said process for collecting and presenting medical survey  
179 information, said evaluating comprising:
- 180 (A) evaluating the performance of said CATI agents; and
- 181 (B) evaluating the performance of said voice recognition processing.

- 1 29. A process for collecting and presenting medical survey  
2 information for a medical care provider as in claim 25, wherein said participant  
3 is selected from the group of doctors, medical staff, medical patients, a family  
4 member of a medical patient, and a medical care employer; and further  
5 wherein said participant gave or received services from said medical care  
6 provider.